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TITLE : INK REPELLING TREATMENT AGENT AND INK-PHILIC TREATMENT AGENT FOR NOZZLE OF INK JET RECORDING HEAD, PRODUCTION OF INK JET RECORDING HEAD, AND INK JET RECORDING HEAD

ABSTRACT : PROBLEM TO BE SOLVED: To prepare an ink repelling treatment agent and an ink-philic treatment agent for a nozzle forming an ink repelling film excellent in durability or an ink-philic film excellent in durability on the outside surface of the nozzle by the compounding of fluoroalkylsilane, an acid and water and the compounding of a hydrophilic compd. having a specific substituent, an acid and water.

SOLUTION: The ink repelling treatment agent for a nozzle of an ink jet recording head is prepared by compounding 0.05-20wt.% of fluoroalkylsilane, 0.01-30wt.% of water and 5-90mmol/kg of an acid. An ink-philic treatment agent for a nozzle is prepared by compounding 0.05-20wt.% of a hydrophilic compd. 0.01-35wt.% of water and 5-90mmol/kg of an acid having a substituent capable of chemically bonding to the nozzle constitutional material of the ink jet recording head. As a concrete example of an acid compounded with the respective treatment agents, a mineral acid such as hydrochloric acid or nitric acid and methyl sulfate are designated. As a concrete example of a substituent of a hydrophilic compd., there is halogen or an alkoxy group.

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